



How to Read This Supplemental Report

The SARS-CoV-2 variant therapeutic data in this report have been curated in collaboration with the National Institutes of Health (NIH) [Accelerating COVID-19 Therapeutic Interventions and Vaccines \(ACTIV\) Preclinical Working Group](#) with support from the Foundation for the National Institutes of Health (FNIH). New and updated information will be added on a weekly basis as more studies are shared. Please continue to check back as our curated database grows. Please contact us at NCATSOpenDataPortal@nih.gov with any feedback, comments, or questions to help us improve this resource.

What Data is Included?

The underlying data in these visualizations has been curated, in collaboration with ACTIV, from a prioritized set of publications (both preprints and peer-reviewed articles). To improve data accuracy, publications are limited to prominent therapeutic agents (both approved and in clinical trial), with an emphasis on studies conducted 1) by the sponsoring pharmaceutical company or 2) with a government partner. **The OpenData Portal does not intend to serve as a comprehensive dashboard for all variant therapeutic data published in the literature.**

How to Interpret the Visualizations

The visualization graphics are meant to provide a quick-glance summary of how **individual SARS-CoV-2 variants** may respond to known therapeutics, compared to reference strains. The displayed fold-change values represent data collected from published *in vitro* viral neutralization assays comparing variants to a reference strain.

Of important note, the data displayed were generated:

- From different assay types and conditions
- By different research laboratories
- Using different reference strains
- With test material from different sources/of potentially different grades, tested at different dose ranges

As a result, the visualizations **should not be used to conduct side-by-side comparisons** of therapeutics. Reported minimum fold reduction values (e.g. >1000-fold) may have greater actual fold change values than those displayed. Furthermore, the data shown are collected from *in vitro* assays, and it is not known how *in vitro* neutralization assay data correlate with clinical outcomes. It is worth noting that the experimental therapeutic concentrations are not necessarily correlated to clinical concentrations; thus therapeutics with large reported fold reductions in activity **may still be active against the variants in clinical settings**, as standard dosing/exposure in patients could exceed the required therapeutic window. Lastly, the data may be from preliminary reports that **have not been peer reviewed** and thus should not be regarded as conclusive, guide clinical practice or health decisions, or be reported in news media as established information.

Interactive versions of these graphics are available on the [OpenData Portal Visualization Page](#)
Additional details on the visualized data are available on the [NCATS OpenData Portal](#).



New to the OpenData Portal Variant Database this week:

New Therapeutics: **XAV-19 (neutralizing antibody); ZF2001 (vaccine); BBIBP-CorV (vaccine); MVC-COV1901 (vaccine)**

New Datasets:

1. Ensovibep demonstrates in vitro efficacy against SARS-CoV-2 variants

Data provided by
Molecular Partners

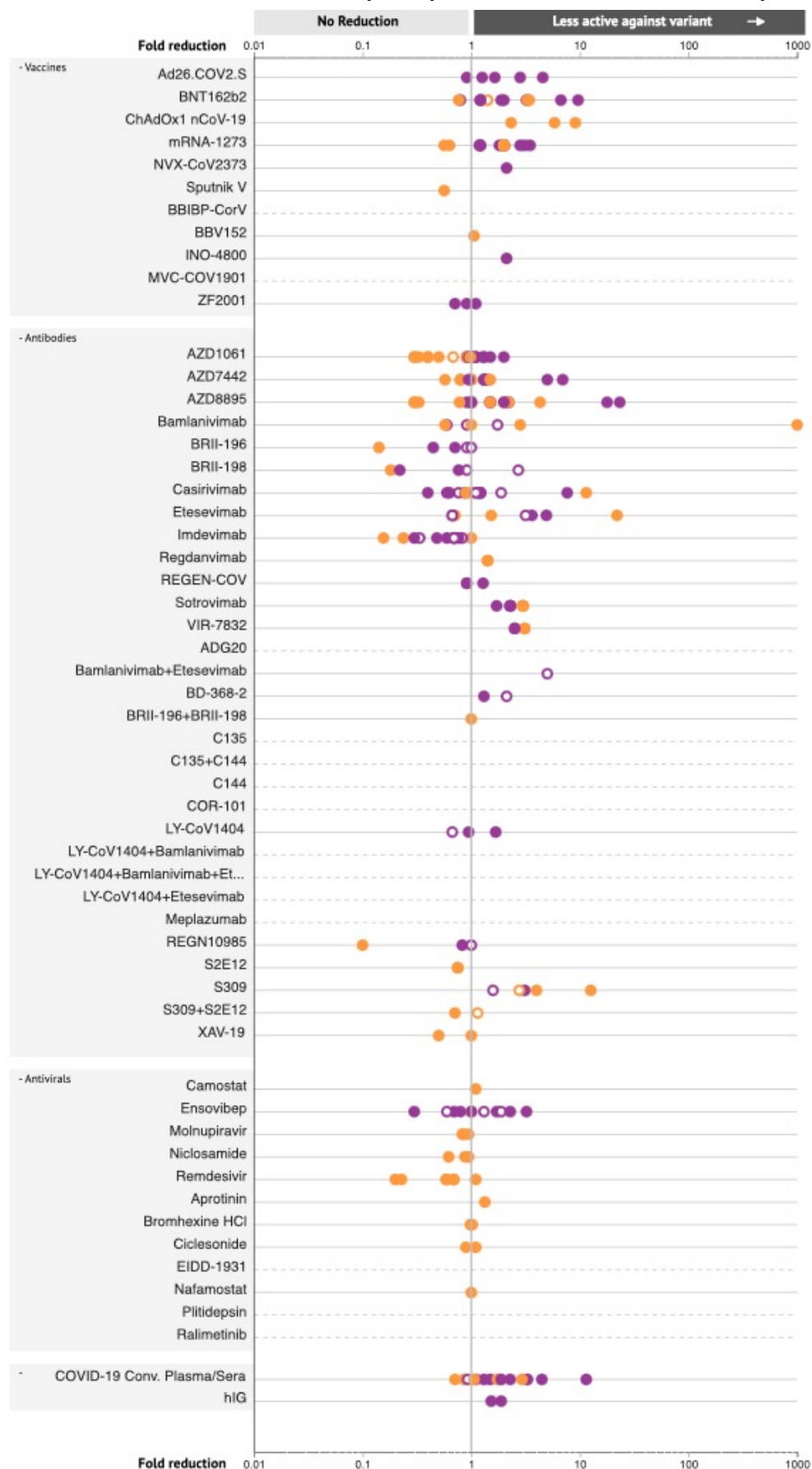
New Pre-prints and Publications:

1. [Neutralization of SARS-CoV-2 Variants B.1.429 and B.1.351](#) [Peer-reviewed publication]
2. [Serum Neutralizing Activity Elicited by mRNA-1273 Vaccine](#) [Peer-reviewed publication]
3. [Neutralization of recombinant RBD-subunit vaccine ZF20001- elicited antisera to SARS-CoV-2 variants including Delta](#) [Pre-print]
4. [XAV-19, a novel swine glyco-humanized polyclonal antibody against SARS-CoV-2 spike, efficiently neutralizes B.1.1.7 British and B.1.351 South-African variants](#) [Pre-print]
5. [Serum sample neutralization of BBIBP-CorV and ZF2001 vaccines to SARS-CoV-2 501Y.V2](#) [Peer-reviewed publication]
6. [Evaluating the neutralizing ability of a CpG-adjuvanted S-2P subunit vaccine against SARS-CoV-2 Variants of Concern](#) [Pre-print]

Updated Pre-prints and Publications with New Data:

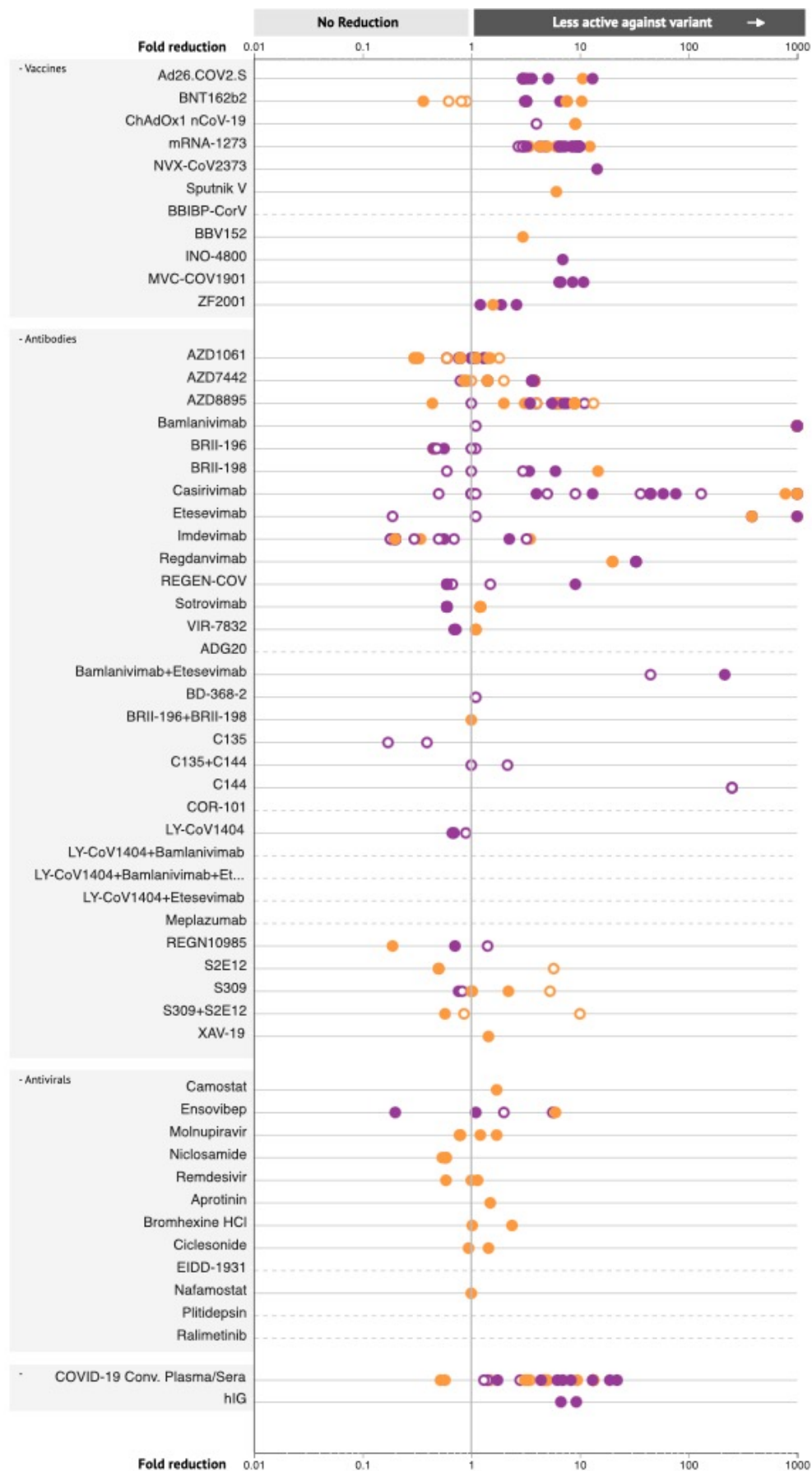
1. [The dual function monoclonal antibodies VIR-7831 and VIR-7832 demonstrate potent in vitro and in vivo activity against SARS-CoV-2](#) [Pre-print]
2. [Neutralization of SARS-CoV-2 spike 69/70 deletion, E484K, and N501Y variants by BNT162b2 vaccine-elicited sera](#) [Peer-reviewed publication]

B.1.1.7 | Reported *in vitro* Therapeutic Activity



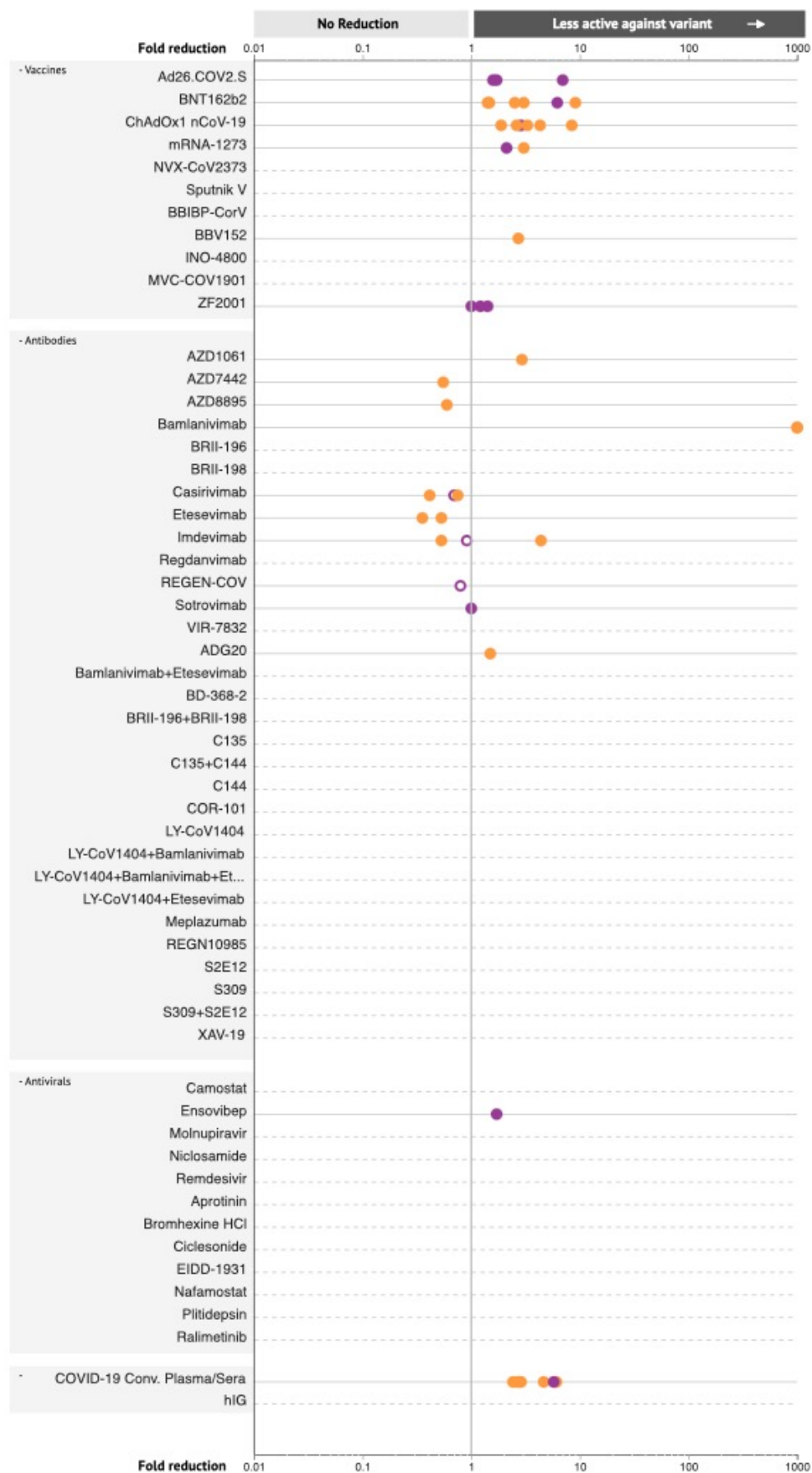
- Full Variant (Live virus)
- Full Variant (Pseudovirus)
- Partial Variant (Live virus)
- Partial Variant (Pseudovirus)

B.1.351 | Reported *in vitro* Therapeutic Activity



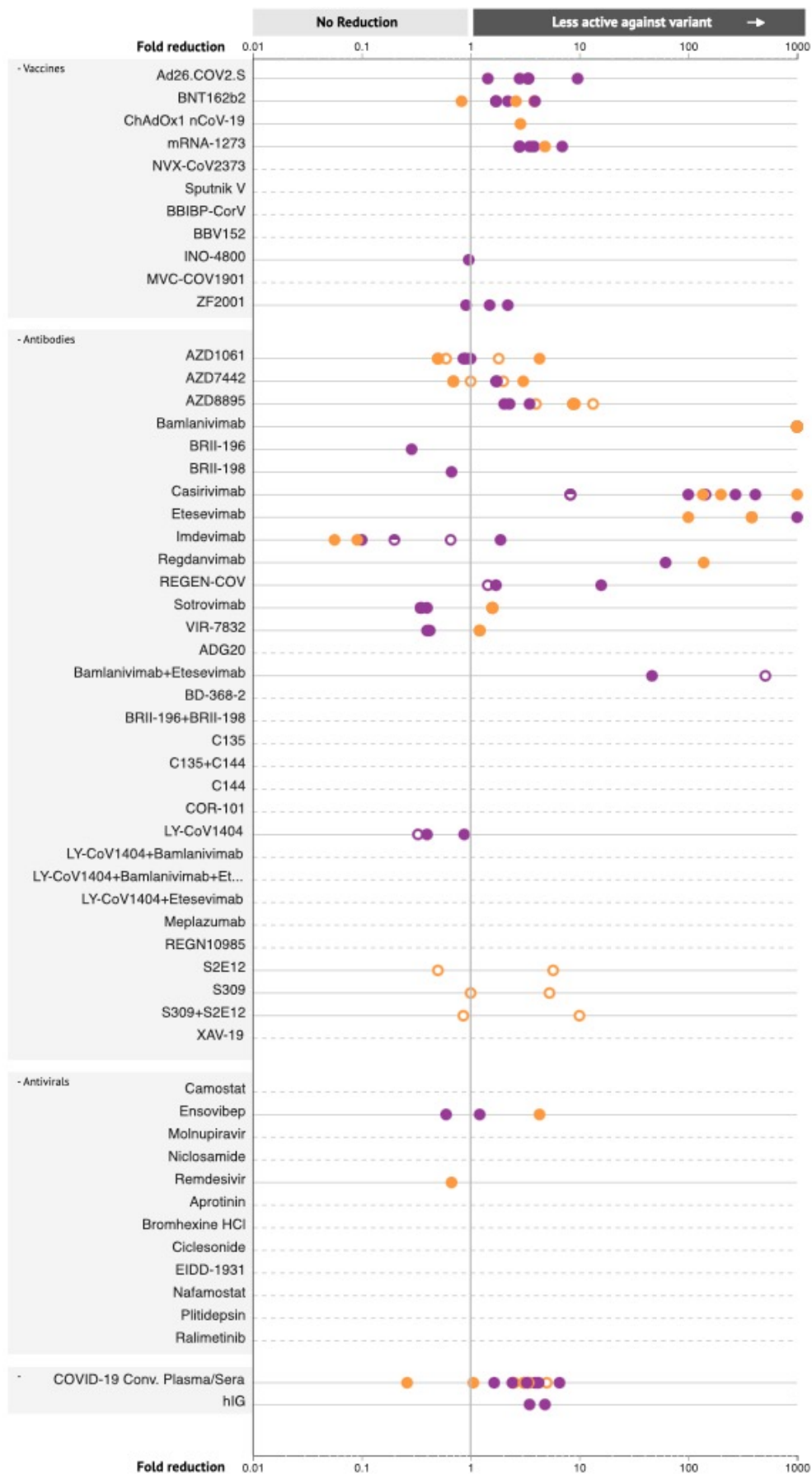
- Full Variant (Live virus)
- Full Variant (Pseudovirus)
- Partial Variant (Live virus)
- Partial Variant (Pseudovirus)

B.1.617.2 | Reported *in vitro* Therapeutic Activity



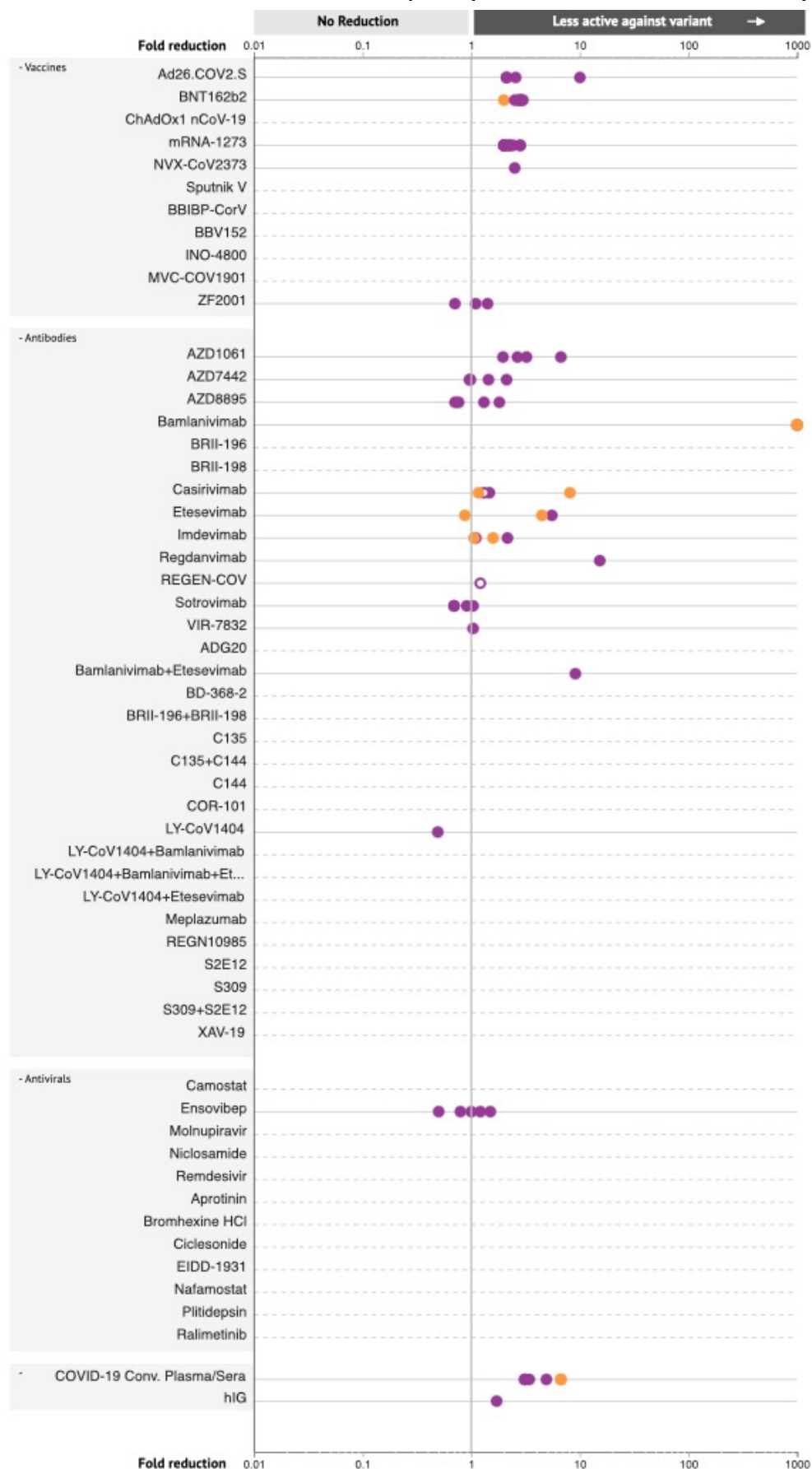
- Full Variant (Live virus)
- Full Variant (Pseudovirus)
- Partial Variant (Live virus)
- Partial Variant (Pseudovirus)

P.1 | Reported *in vitro* Therapeutic Activity



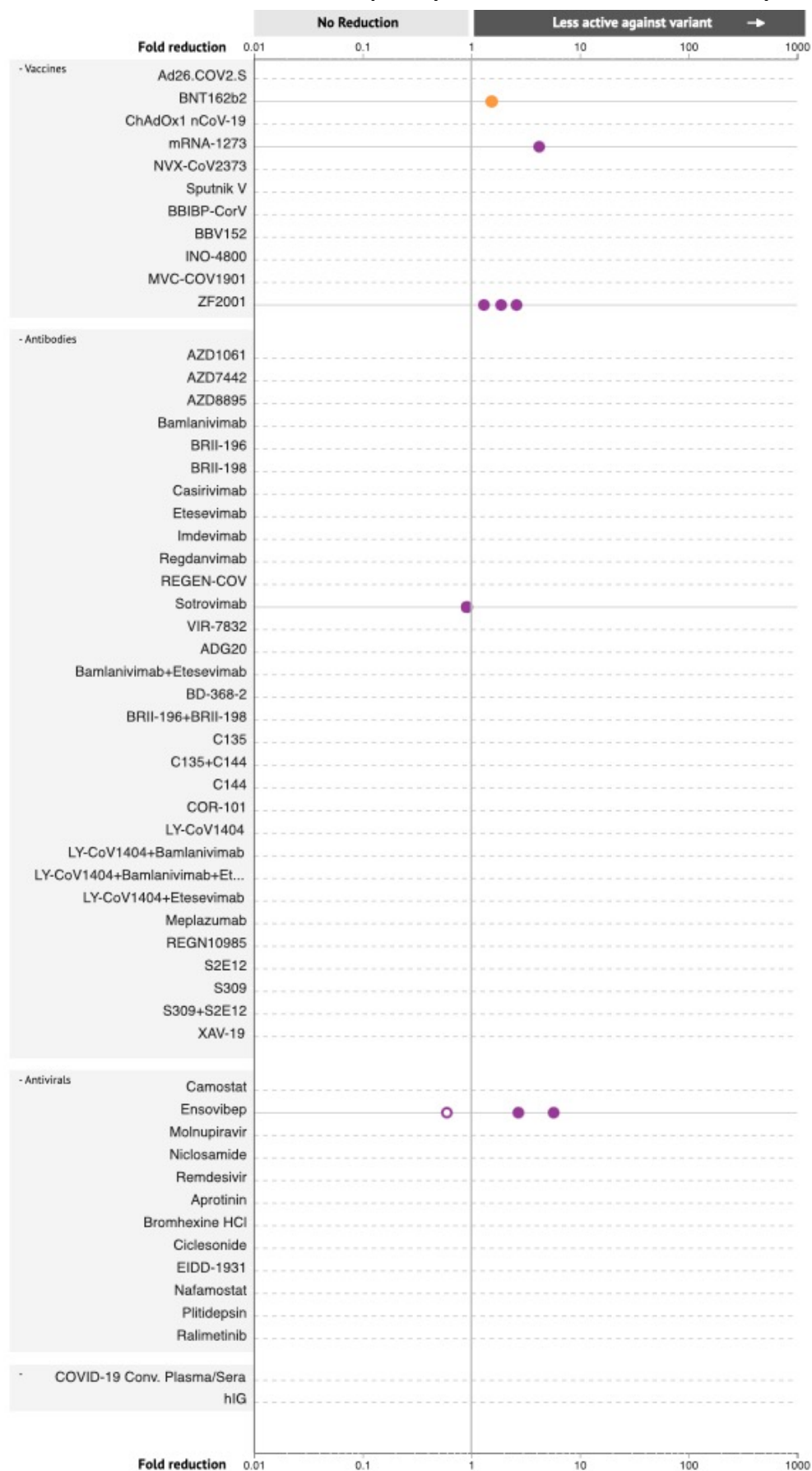
- Full Variant (Live virus)
- Full Variant (Pseudovirus)
- Partial Variant (Live virus)
- Partial Variant (Pseudovirus)

B.1.427/429 | Reported *in vitro* Therapeutic Activity



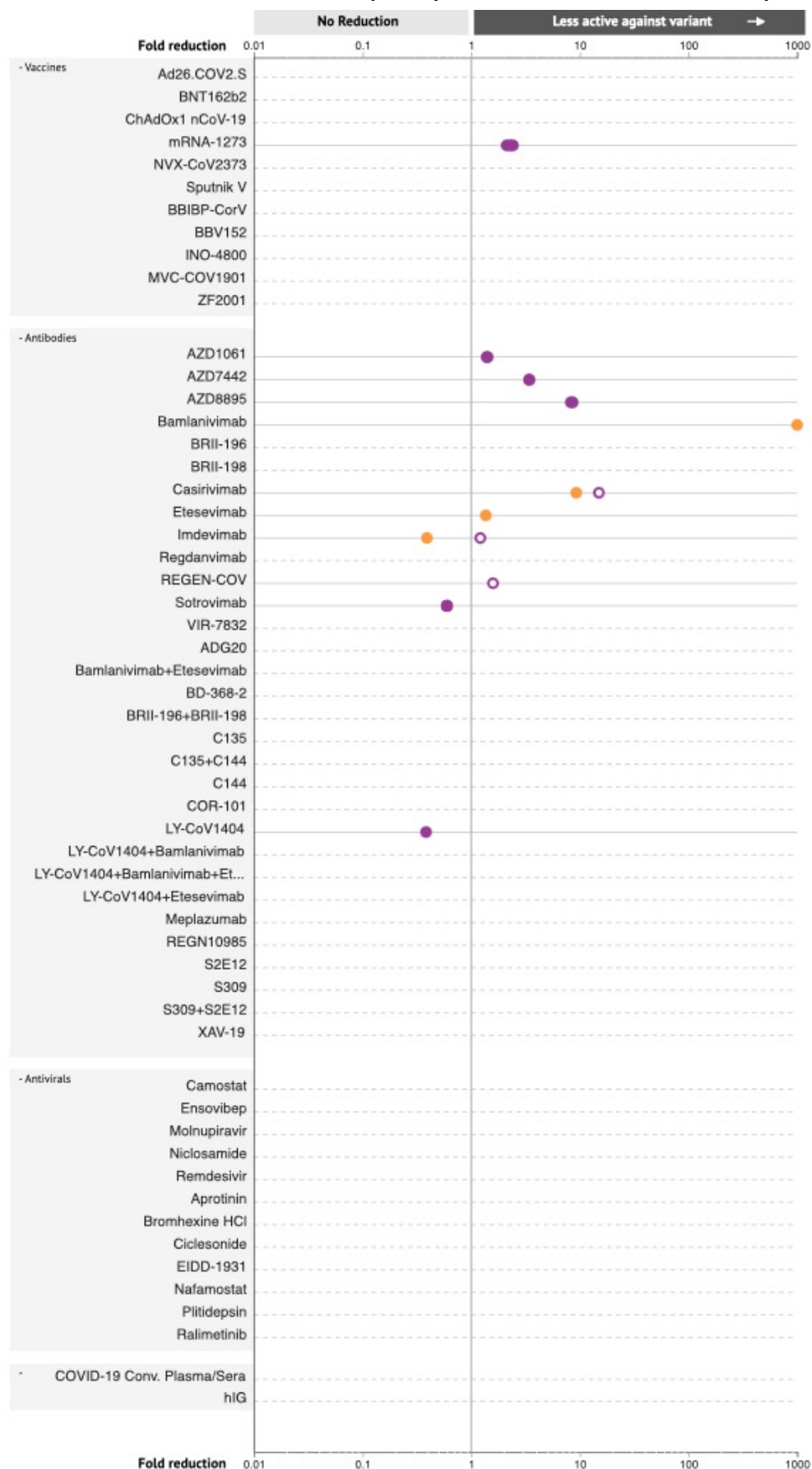
- Full Variant (Live virus)
- Full Variant (Pseudovirus)
- Partial Variant (Live virus)
- Partial Variant (Pseudovirus)

B.1.525 | Reported *in vitro* Therapeutic Activity



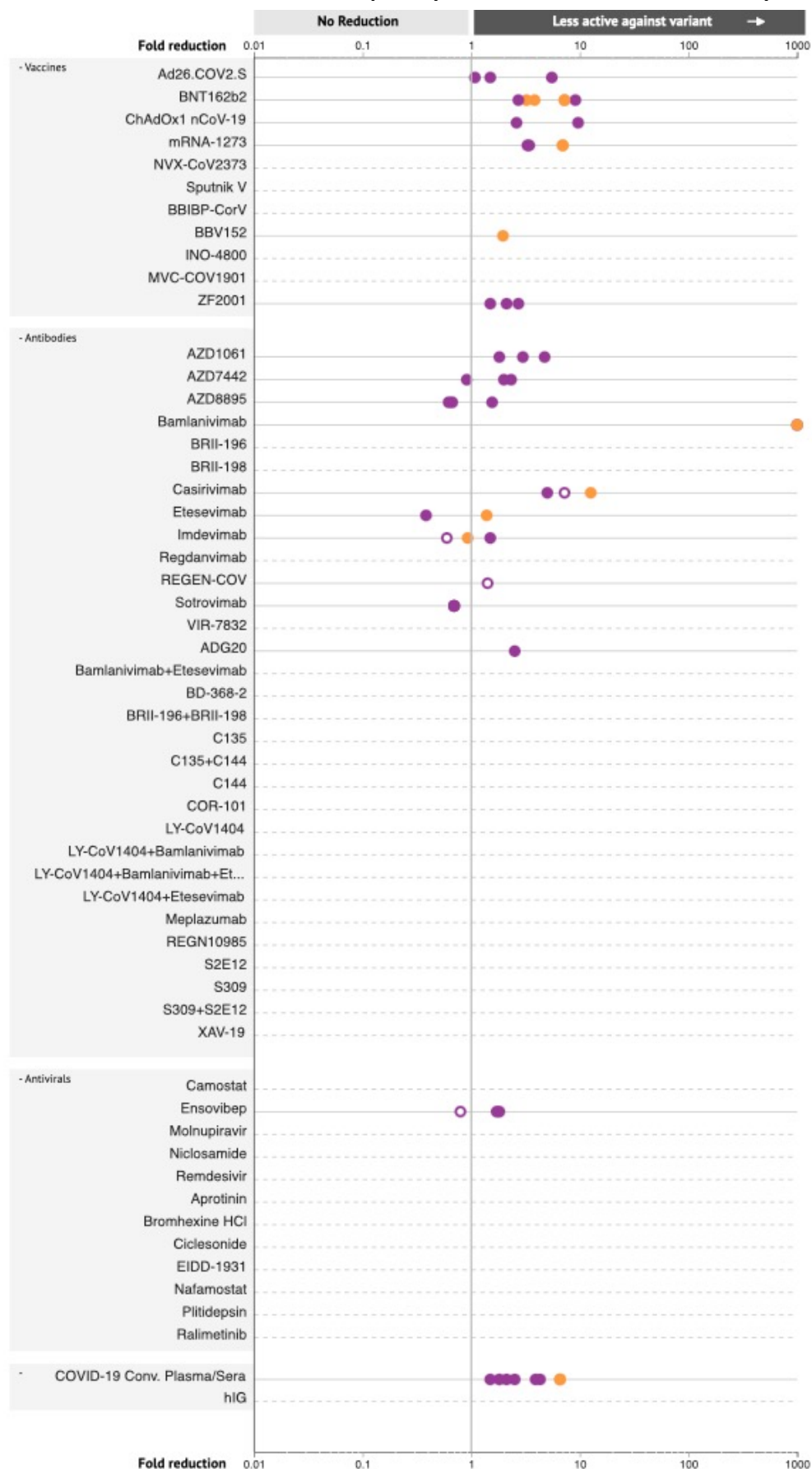
- Full Variant (Live virus)
- Full Variant (Pseudovirus)
- Partial Variant (Live virus)
- Partial Variant (Pseudovirus)

B.1.526 | Reported *in vitro* Therapeutic Activity



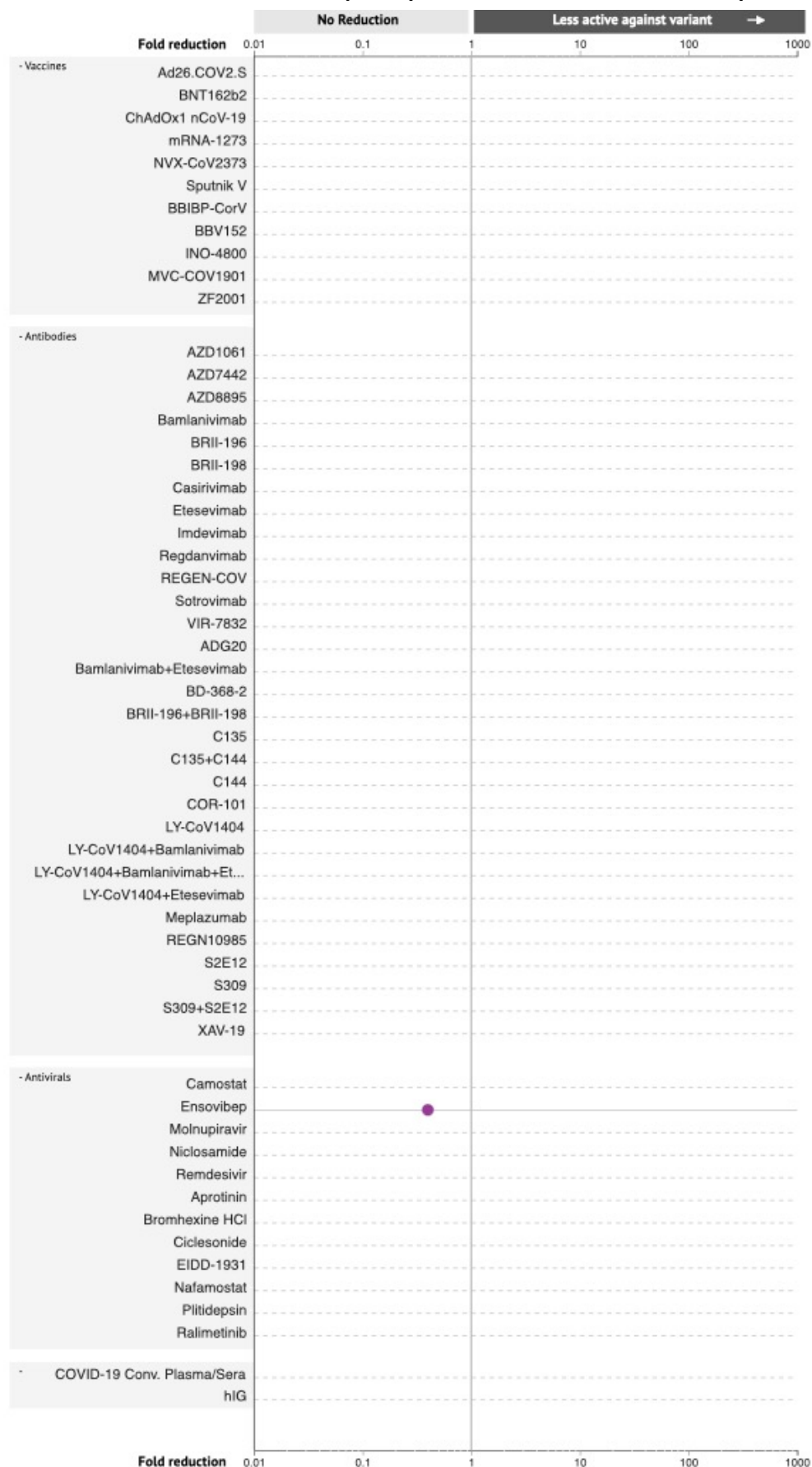
- Full Variant (Live virus)
- Full Variant (Pseudovirus)
- Partial Variant (Live virus)
- Partial Variant (Pseudovirus)

B.1.617 | Reported *in vitro* Therapeutic Activity



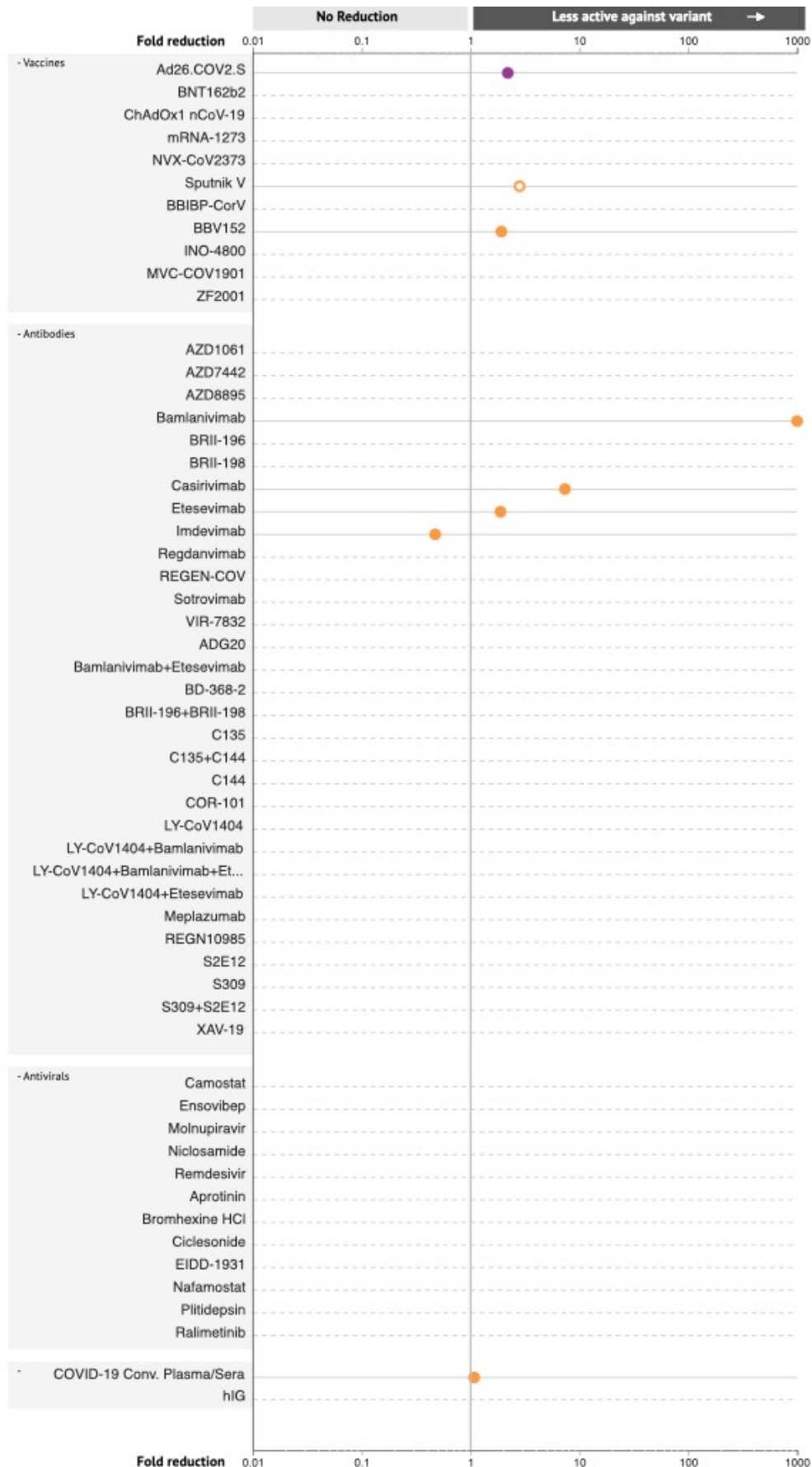
- Full Variant (Live virus)
- Full Variant (Pseudovirus)
- Partial Variant (Live virus)
- Partial Variant (Pseudovirus)

C.37 | Reported *in vitro* Therapeutic Activity



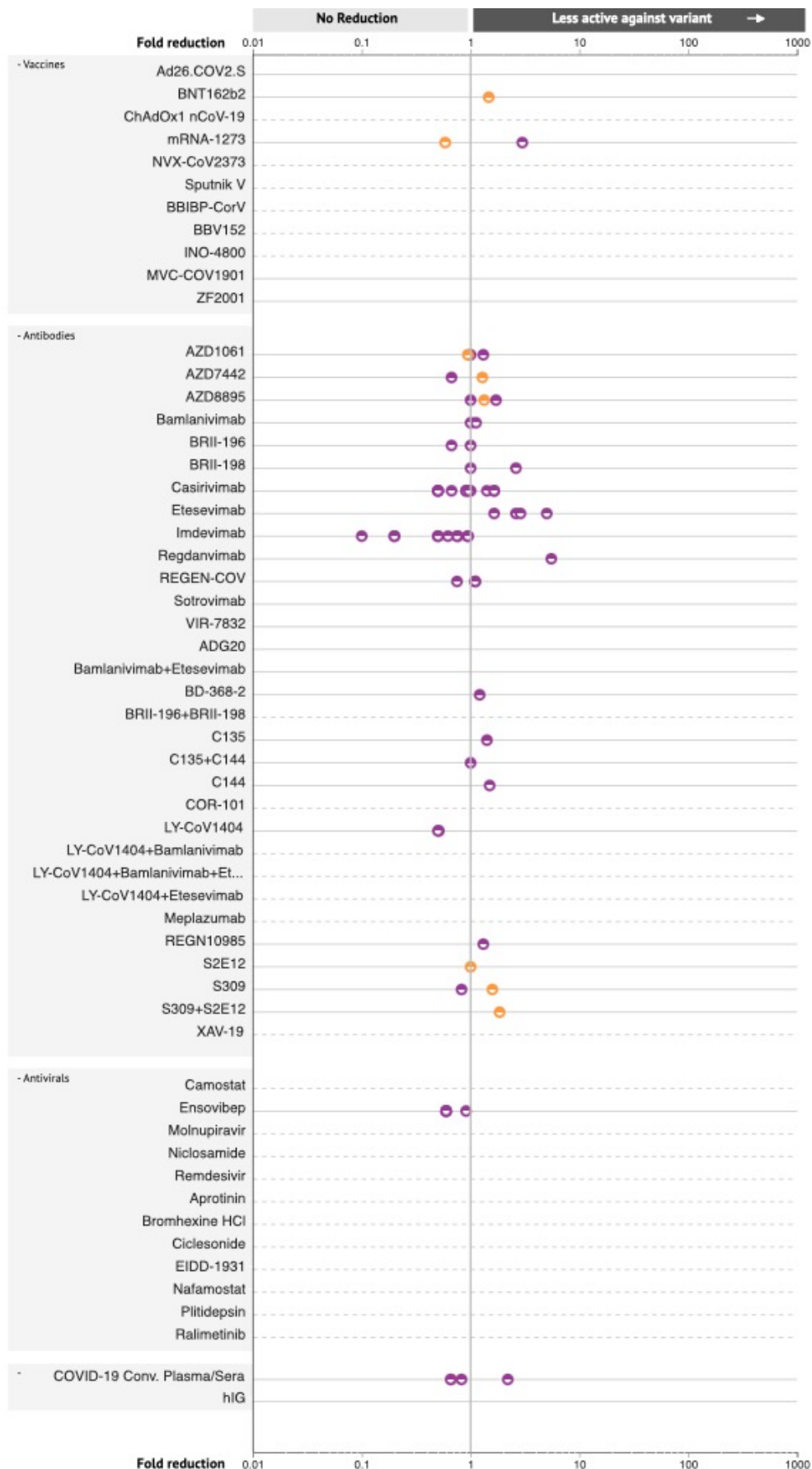
- Full Variant (Live virus)
- Full Variant (Pseudovirus)
- Partial Variant (Live virus)
- Partial Variant (Pseudovirus)

P.2 | Reported *in vitro* Therapeutic Activity



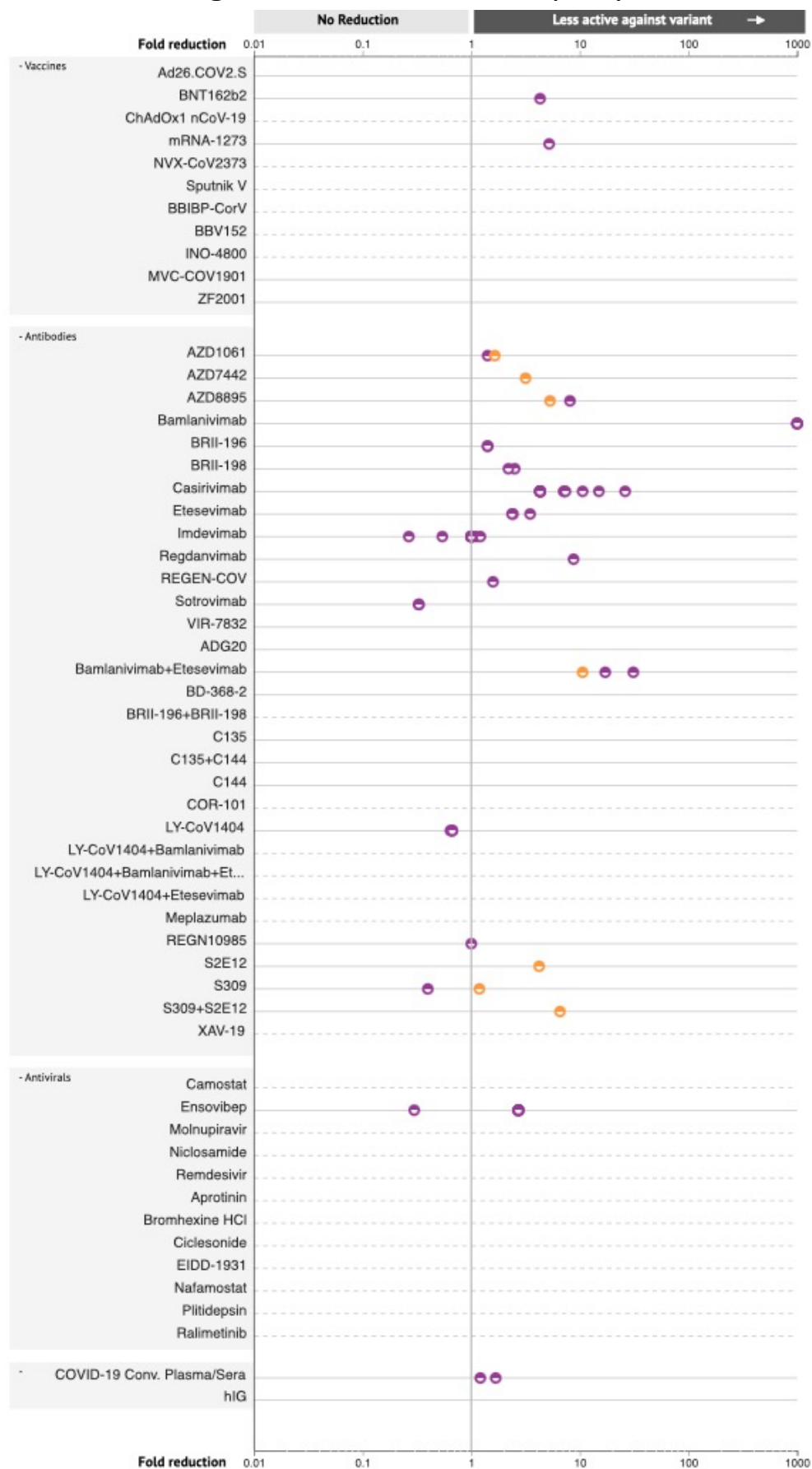
- Full Variant (Live virus)
- Full Variant (Pseudovirus)
- Partial Variant (Live virus)
- Partial Variant (Pseudovirus)

N501Y Single Mutation Variant | Reported *in vitro* Therapeutic Activity



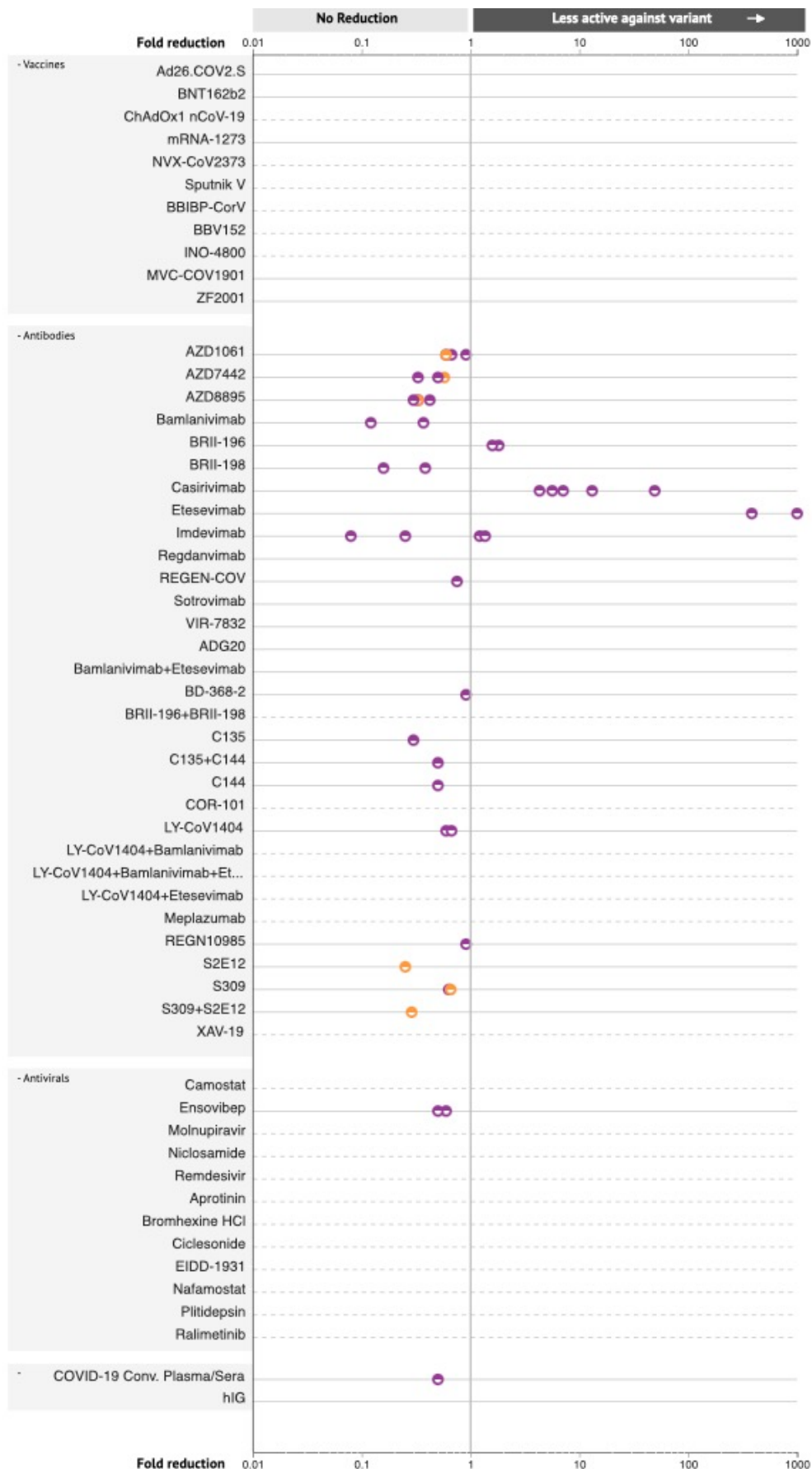
- Single Mutation Variant (Live virus)
- Single Mutation Variant (Pseudovirus)

E484K Single Mutation Variant | Reported *in vitro* Therapeutic Activity



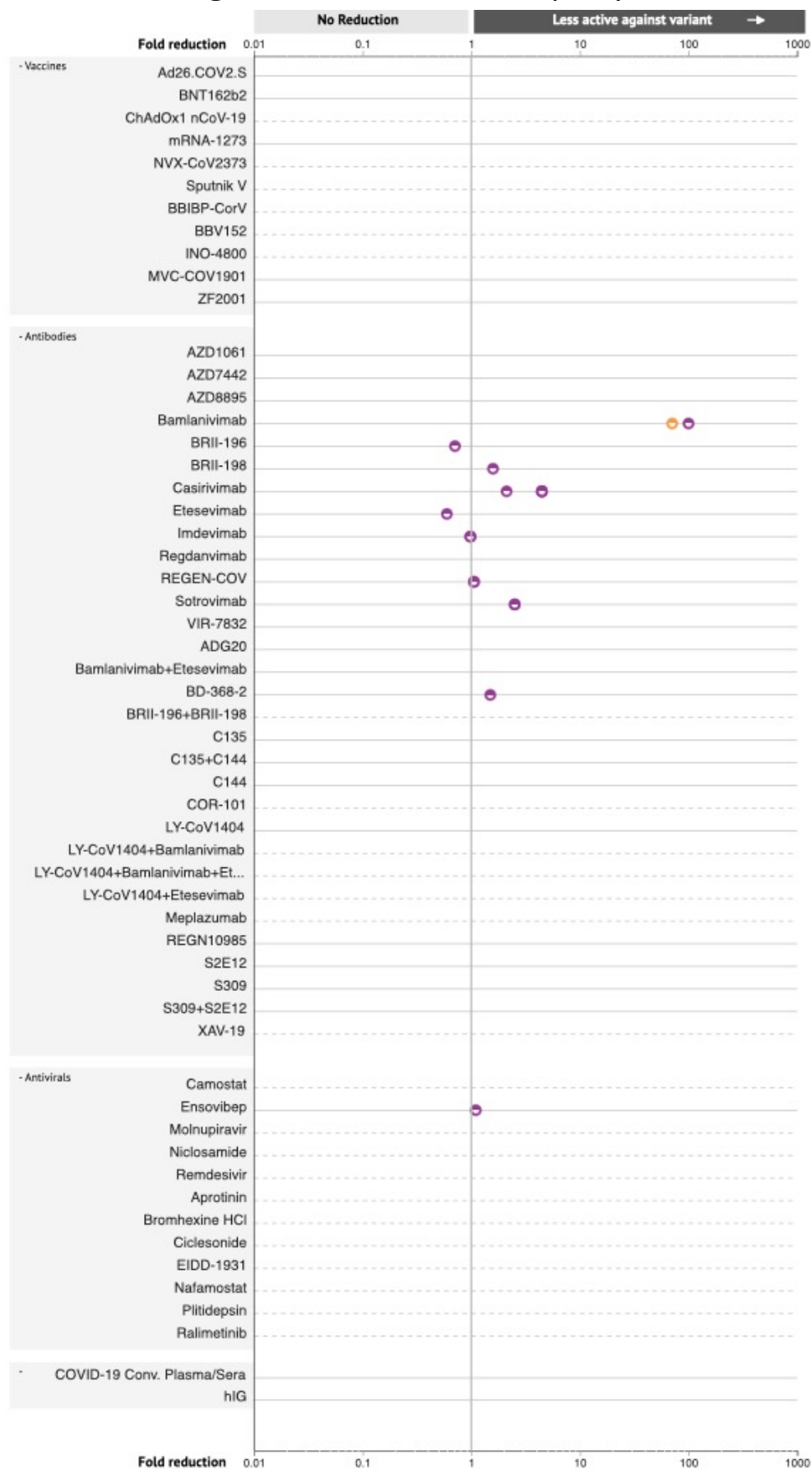
- Single Mutation Variant (Live virus)
- Single Mutation Variant (Pseudovirus)

K417N Single Mutation Variant | Reported *in vitro* Therapeutic Activity



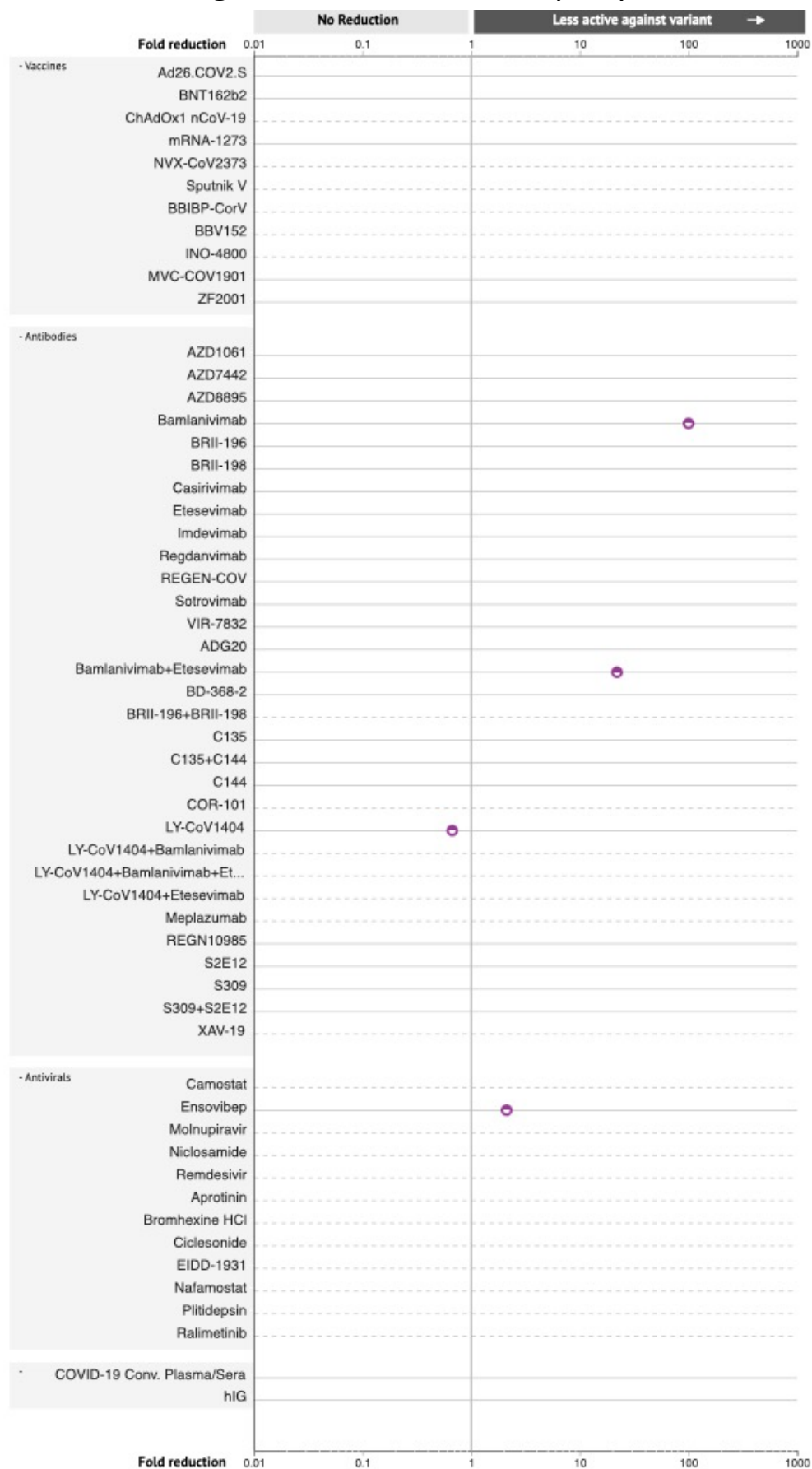
- Single Mutation Variant (Live virus)
- Single Mutation Variant (Pseudovirus)

S494P Single Mutation Variant | Reported *in vitro* Therapeutic Activity



- Single Mutation Variant (Live virus)
- Single Mutation Variant (Pseudovirus)

E484Q Single Mutation Variant | Reported *in vitro* Therapeutic Activity



- Single Mutation Variant (Live virus)
- Single Mutation Variant (Pseudovirus)